Measuring entrepreneurial environments in Africa

Measuring Entrepreneurship Environments in Africa:

Challenges in Using International Reports

Abstract

Entrepreneurial environments are significant for entrepreneurial activities. Investigating such environments is necessary because of their complexity and dynamism. This work attempted to analyze international datasets that measure entrepreneurship environments in Africa to identify the challenges faced when using these databases.

The datasets selected explored the different dimensions of the entrepreneurial environment. Combining these datasets provides a thorough coverage of entrepreneurship environments because of the wide spectrum of indicators. Instead, comparing these datasets will reveal their convergence and divergence. The major challenges is that not all countries are included in most of the datasets and the survey periods differ making it difficult to conduct longitudinal studies. The findings suggested ways and means by which such challenges could be mitigated so that scholars, practitioners and institutions could have improved and better entrepreneurship environments data in Africa.

Keywords: Entrepreneurship environments, International reports and indices, Africa

1.0 Introduction

Entrepreneurship has been acclaimed to play a significant role in the economic growth of countries. It is also acknowledge that entrepreneurship differs within and across countries, and also across continents. Entrepreneurship in general is the interaction of entrepreneurs and the entrepreneurial

environment. There is a burgeoning literature about entrepreneurs but existing knowledge about the entrepreneurial environment is limited and fragmented (Gnyawali and Fogel, 1994). Knowledge about entrepreneurial environments in least developed societies like Africa (Bruton, Ahlstrom and Obloj, 2008) is scarce and limited in the existing literature. This paucity, justifies the need to explore entrepreneurial environments in Africa to understand the underlying factors that influence these environments and to contribute to the existing body of knowledge. Policymakers need to have a thorough knowledge about these underlying factors when designing country specific entrepreneurship policies that can boost entrepreneurial economic growth. Similarly, entrepreneurs need to understand the environment in which they are operating, as such understanding will contribute to entrepreneur's decision to explore and exploit opportunities but most studies have paid little attention to the entrepreneur (Gnyawali and Fogel, 1994).

There is a plethora of indices and reports that measure entrepreneurship at the global level but most African countries are not included. The exclusion, might be due to many reasons ranging from entrepreneurship being an under-researched phenomenon in most countries in Africa, the absence of entrepreneurship scholars in these countries, the lack of interest from external scholars to investigate entrepreneurship in most countries, political instability and security concerns when conducting field studies and sometimes the unreliability of data from national databases. This has led to the creation of a picture about entrepreneurship environments in the continent that does not reflect the real situation. Though databases that deal with entrepreneurship have been compared in the past, this is the first study that investigates the challenges faced when using databases to examine the entrepreneurship environments in Africa.

The African continent is made up of fifty four diverse countries excluding the partially recognized and dependent territories. Taking into consideration the diversity of countries in Africa, generalization about entrepreneurship environments is very difficult. This study will attempt to

examine commonly referenced reports and indices that evaluate entrepreneurship in an effort to reveal the obstacles and constraints encountered when utilizing these reports and indices for conducting longitudinal multiple case studies. Extant literature in most cases compares either two or more databases to determine the correlations of variables or uses a single database to compare two or more countries. For example, Desai (2009), study entitled "Measuring Entrepreneurship in Developing Countries", Rahman (2008), in his work that links the GEM 2006 report and Hofstede's Indicators for Indonesia, and Acs, Desai and Klapper (2008) research paper on comparing the GEM and WBGES databases.

The difficulties faced by researchers using international databases to investigate multiple national economies in Africa are enormous and are under-researched. To fill this gap, the paper considers the following research questions.

(a) What are the challenges faced by researchers conducting research about the entrepreneurship environments in Africa using various international databases?

(b) How do these challenges impact the findings of the researchers?

(c) What should be done to mitigate such impact?

Although international reports and have contributed immensely in understanding the entrepreneurship environments in Africa, the focus on just a few countries at a time has not permitted an holistic coverage of the continent. For datasets to be useful for the comparison of countries and for generalization of research findings, more countries should be surveyed at the same time. This will enhance both cross-sectional and longitudinal comparisons of countries. The surveys are usually conducted by international institutions or consortiums though some data are obtained from national data centers of countries. But the reliability and credibility of national databases is often questionable, since such data are collected by public agencies such as central statistics offices

that are dependent on central governments and as a consequence, such data are prone to manipulation. Data collected by international agencies is considered to be more reliable and valid as bias is reduced to a minimum because of the neutrality of such institutions. Preference is therefore given to the use of data from international institutions for assessing entrepreneurship environments and for benchmarking purposes. The exclusion of many countries from these international databases therefore poses constraints for those aspiring to use such datasets.

The paper is structured as follows; section 2 reviews the importance of the entrepreneurial environment in and section 3 gives a summary description of all the databases used alongside the criticisms of these databases. The comparisons are made in section 4 and section 5 elaborates on the findings and the conclusions, implications and limitations are presented in section 6.

2.0 The importance of the entrepreneurial context

Entrepreneurship is increasingly becoming the domain of organization, regions and countries and not only individuals. Organizations, regions and countries are environments that have an abundance of entrepreneurial opportunities and resources that are increasing in quantities and varieties (Thornton and Flynn, 2003). The entrepreneurial environment is referred to as the combination of factors that are crucial for the development of entrepreneurship. It includes the overall economic, social, cultural and political factors that can influence an individual's capability and willingness to undertake entrepreneurial activities and it also refers to the availability of adequate support and assistance necessary to prompt an individual with entrepreneurial intentions to engage in entrepreneurial activities (Gnyawali and Fogel, 1994). Entrepreneurship environments are classified into three main groups; (1) general environmental conditions for entrepreneurship, (2) descriptive studies of the environmental conditions, at the global level or those of a particular country or region, (3) the role of public policy in building a conducive environment according to Gnyawali and Fogel, (1994). This paper will concentrate on the group (2) with a focus on the African continent. Studies

on entrepreneurship are termed as incomplete if they concentrate only on the entrepreneur and neglect the environment or treat it as some external demographic statistics posited Van de Ven (1993). The shift of focus from the study of firms to the study of individual entrepreneurs as agents of change (Audretsch, 1995) heralds the need to examine the entrepreneurship environment as it is essential from the either the supply or demand perspectives of entrepreneurship (Thornton, 1999).

In countries where entrepreneurs are already well established like the United States of America, there is a tendency that entrepreneurs will benefit from the work previous entrepreneurs and other key players have already completed with regards to the shaping of the entrepreneurship environment whereas entrepreneurs and other stakeholders in countries where entrepreneurship is not yet well established are forced by circumstances to primarily engage into activities that help to develop and shape their own entrepreneurship environments (Aldrich and Martinez, 2003). These activities include raising the awareness of the population about the existence of entrepreneurs and the creation of a system of competition and cooperation that facilitates survival in the long term (Aldrich and Martinez, 2003). Entrepreneurs in the latter situation face risks under uncertainty which is common in Africa. Some kind of collective action is required to create entrepreneurship environments conducive to entrepreneurs in such situations as these environments play a significant role to foster entrepreneurial activities whilst a lack of such environments can be detrimental to potential entrepreneurial activities especially in developing countries.

Though the main concern when considering entrepreneurship environments is governments' input in terms of unleashing and promoting entrepreneurship, other key factors that are linked to the entrepreneurship environment are the cognitive and sociopolitical legitimacy. According to Aldrich and Foil (1994), cognitive legitimacy apply to the acceptance of a new entrepreneurial venture as a taken for granted by the environment through the acceptance of the products, processes or services of a venture as part of the socio-cultural and organizational identity. On the other hand,

sociopolitical legitimacy appertains to the acceptance of new ventures products and processes by stakeholders such as the general public, opinion leaders, professionals, politicians and governments certifying the new entrepreneurship ventures as fitting and desirable. In this regards, the two main components are moral acceptance which refers to conforming to the cultural and social aspects, and regulatory acceptance which applies to the conformity with government rules and regulations.

Government support or lack of influences entrepreneurship environments especially in Africa (Elkan, 1988). The availability of adequate infrastructure which is in a relatively good state and effective institutions can contribute to the creation of conducive entrepreneurship environments. Governments therefore have key roles to play in enhancing the environment (Gartner, 1985). But for governments to intervene effectively, they should have a comprehensive idea of the nature and state of the entrepreneurship environment at any point in time and this is possible thorough robust measurements which at present are carried out with some degree of effectiveness by international institutions interested in evaluating the impact of entrepreneurship environments on entrepreneurship.

Measuring the entrepreneurship environment is important because it permits the documentation, statistical analysis, and mathematical computations necessary for forecasting the future shape of the entrepreneurship environment. It could also provide governments and international agencies with information that is useful in understanding the trend of the entrepreneurship environment so as to be able to evaluate areas that need more attention when formulating entrepreneurship policy as the validity, reliability and interpretation of measurements is crucial (Desai, 2009). The heterogeneity among entrepreneurship environments in Africa which could be of interest to researchers, can be determined through the measurement of the entrepreneurship environment due to the diversity of countries in Africa. To measure the entrepreneurship environment is not an easy task since the environment is multidimensional, complex and dynamic and to date, scholars have been not been

able to progress in the search for a robust and solid measure (Stenholm, Acs and Wuebker, 2013). One of the reasons for this difficulty can be attributed to the fact that available indicators measure everything from characteristics of the entrepreneur to the outcome of the entrepreneurial process (Hoffmann, Larsen and Oxholin, 2006). Different types of measurements have therefore been forwarded by various individuals, institutions and organizations involved in the field of entrepreneurship. The absences of a globally accepted definition of entrepreneurship and conceptual framework, has ushered in different views about entrepreneurship which are discipline dependent.

The challenges of measuring entrepreneurship environments in developing countries are even harder as measures usually concentrate on the formal sector which only represents a fraction of the entrepreneurial activities in a country as most of the entrepreneurs operate in the informal sector (Desai, 2009; Storey, 1991). Nevertheless, the difficulties in measuring the entrepreneurship environment, entrepreneurship has been considered as an effective mechanism for internally directed economic growth through job creation regardless of the level of economic development of the country (Acs, 1992; Minniti and Levesque, 2008; Acs, Desai and Klapper, 2008). It is therefore critical to the development and the prosperity of society hence measurements that relate to the entrepreneurial activities of countries should therefore be better understood and easily interpreted for upgrading schemes responsible for entrepreneurship improvement (Kelly, Bosma and Amorós, 2011; Friedman, 2011).

Different indicators are used in measuring entrepreneurship. Another aspect of this study is to look at the indicators related to the entrepreneurship environments as examining the entrepreneurial context indicators can enhance the comprehension of subtle differences in societal, cultural and institutional forces that may have an impact on the performance of entrepreneurial activities. This has been the case with international comparative studies of developed, emerging and least developed economies as such differences can explain the variations in ventures being created, why

were they created, how have they been created and how do they survive, grow and being harvested (Welter, 2011; Zahra and Wright, 2011).

The rate of entrepreneurship activities is known to vary markedly across countries but it is still difficult to precisely explain the cause of the variation, as explanations offered so far have failed to take into consideration the multidimensional nature of the entrepreneurship phenomenon (Stenholm, Acs and Wuebker, 2013). A comprehensive knowledge about the rate and type of entrepreneurship that is practiced in a particular country is of most importance to policymakers and researchers but to gain such knowledge, the underlying framework conditions necessary for the different types of entrepreneurship need to be thoroughly understood (Stenholm, Acs and Wuebker, 2013). This type of knowledge can be achieved by studying entrepreneurship environments since previous literature laid a lot of emphasis on examining entrepreneurs and entrepreneurial activities which has created a better understanding of the nature of one of the aspects of entrepreneurship. Nevertheless, more research is needed to address the other aspects such as the heterogeneity of the entrepreneurial context (Hjorth, Jones, & Gartner, 2008; Wright, 2011).

3.0 Description of the data bases

In the past decade, there have been an influx of databases that attempt to measure both the static, dynamic, quality and context of entrepreneurial activities at national level that enhances comparison at the international level. Though the diverse cultural and institutional context in which entrepreneurship activities are performed can make the formulation and implementation of comprehensible and comparable indicators very complex (Marcotte, 2013).

The choice of the databases in this study is centered on the fact that each one of these databases contains at least few African countries, has produced reports consistently in the last few years and

is recognized at the international level. A brief description of each of the reports or indices that are used in the study follows to present what the datasets measure and the criticisms of the datasets.

3.1 The Global Entrepreneurship Monitor

The Global entrepreneurship monitor (GEM) project is an attempt to produce data that can be used to compare entrepreneurship across countries. The main objectives are to facilitate the understanding of the influence of entrepreneurship on economic growth and to identify the factors that enable and or hinder entrepreneurial activities (GEM report, 2012). The GEM uses national teams to conduct the survey with the sample of respondents taken from the adult population and selected national experts. The first GEM survey was conducted in 1999 and only ten developed countries were involved. In 2012, sixty nine (69) countries were surveyed representing most regions of the world. The economies surveyed are divided into three distinctive groups; factor driven, efficiency driven and innovation driven. The primary indicator used by GEM is the Total Entrepreneurship Activity (TEA) which measures the percentage of adults (aged 18 – 64) in a nation that are nascent and new entrepreneurs.

The overall findings of the GEM report include how attitude can influence entrepreneurship in an economy, the total entrepreneurship activity and the growth expectations in an economy (GEM report, 2012). The implications and recommendations are that positive attitudes towards entrepreneurship reflect ambition, intention, and societal support. It also concluded that entrepreneurs at all ages can benefit society but they may require different support. GEM, intends to encourage a better understanding about entrepreneurship and to assist decision makers in making the right decisions about support and conditions that create a conducive environment. In the 2012 report, GEM identified three sets of framework conditions (Education, Government policy and Internal markets) whose underlying fundamentals are necessary for a conducive entrepreneurship environment.

One of the criticisms of GEM forwarded by Avanzini (2009) is that the indicators used as proxies for measuring entrepreneurship, seemed not to be suitable in explaining the complex relationship among all the factors that drive entrepreneurial activities. Available data have not been able to capture or embody entrepreneurship comprehensively either conceptually or empirically (OECD, 2007). Another criticism is that the GEM data is likely to overestimate the early stage entrepreneurship activities since nascent entrepreneurship does not automatically translate into forming a startup venture (Desai, 2009). In addition, the classification of individuals into entrepreneurs and non-entrepreneurs, defies an important dimension of the entrepreneurship phenomenon with respect to the grade of entrepreneurship according to anecdotal evidences. In general, whilst the GEM project theoretical model seems promising , its merits have not yet being fully developed (Valliere, 2010).

3.2 The World Bank Group Enterprise Survey

The World Bank Group Enterprise Survey (WBGES), provides economic data for enterprises in various countries. The Survey considers firms in the non-agriculture sectors with five employees and above. The Survey embodies a wide spectrum of business environment attributes from access to finance, corruption, infrastructure, crime, competition and performance. The Survey commenced in 2002 using different units but as from 2005, the data collection was centralized. The respondents for the Survey are usually business owners or top managers of the manufacturing and services sectors of an economy. A stratified random sampling methodology is used and the preferred method of data collection is face-to-face interviews. The sample is normally obtained from national statistics offices (The World Bank Group, 2013).

The Survey draws upon firm level data from emerging and least developed countries to produce research that is focused on the micro-foundations of growth. The unit of analysis is uniquely the firm, which simplifies the analysis and interpretation of data, gives this data base a major

advantage. The findings and recommendations of the Survey could be useful in helping policymakers in the process of identifying, prioritizing and implementing policy and institutional reforms that enhances effective support for productive private sector economic activities (The World Bank Group, 2013).

A major shortcoming of this data base is that the informal sector which is not included is significant and in most cases the largest component of the economy in developing countries and that most of the enterprises surveyed are corporations which are not really economic units that are not normally operated by entrepreneurs in developing countries (Desai 2009). Another pitfall observed is concerned with the fact that there is no distinction of businesses incorporated for economic activities and those incorporated for tax and non-business activities (Marcotte, 2013). The quality of the statistical information registered may vary across countries.

3.3 The Economic Freedom of the World Report

This report measures the degree to which policies and institutions in various countries are supportive of economic freedom. The pillars of economic freedom are personal choice, voluntary exchange, freedom to compete and security of privately owned property. The degree of economic freedom is measured in five broad areas namely; Size of government, legal structure and protection of property rights, access to clean money, freedom to trade internationally and regulation of credit, labor and business (Economic Freedom, 2011). In an economically free environment, the authorities are occupied in the protection of individuals and their property from aggressors and for a country to score high in this index, there are a number of functions such as secure protection, fairness, and a stable monetary environment that must be provided effectively (Economic Freedom, 2011). The index provides a comprehensive way to compare the strength of economic institutions across different countries (Naanwaab and Diarrassoula, 2013).

Haan, Lundstrom and Strum (2006) commented that there is some kind of hesitation from scholars to use this Index data because its reliability is questionable taking into consideration the ideological position of the institutions involved in compiling the report. But other scholars such as Paldam, (2003) argue that a looming ethical issue should not prevent would-be users of the report to hesitate using it as the argument is not compelling enough. Other criticisms are that the index seems to be an agglomeration of heterogeneous variables where some components exhibit institutional characteristic whilst others exhibit policy characteristics (Haan, Lundstrom and Strum 2006) and the measurements are suspected to be qualitatively biased which implies that they are devoid of objectivity. The measurements are inconsistent across spatial and temporal dimensions because of lack of data for some components, echoed Heckleman and Knack (2004). Despite of these criticisms, the index has been used widely and its proponents argue that the primary purpose of the creation of the index was to bring in much needed scientific knowledge into the debate surrounding the benefits of free market economic system versus the interventionist system (Lawson, 2006).

3.4 Hofstede's Indicators

These indicators were developed by Hofstede (1991) and they measure five dimensions of culture: individualism–collectivitism; masculinity–femininity; high versus low power distance; high versus low uncertainty avoidance; long term versus low term orientation. Three levels of cultural values identified are the universal, collective and individual according to Hofsted (1984). Cultural indicators are important because they provide a means by which cultural differences can be better understood and they also enhance the forecasting of the behavior of people in various cultures (Ewest, 2011). All these indicators play a significant role determining the attitude of individuals towards entrepreneurship. In the present era of rapid globalization, and the relative shrinking of the distances between countries, understanding cultural difference especially in the realm of entrepreneurship is no longer an option. International and transnational entrepreneurs need to

possess a corpus of knowledge of the cultures in which they operate for the purposes of decision making and negotiations. There is no database per se that is published, what exists is a tool that allows the comparison of countries provided by the Hofstede Center.

Some of the limitations include the difficulty of a representative sample, meaning that it might be necessary to randomly sample all the cultures of the world. An aggregated simplification of cultures might create stereotypes and some of the methodological and statistical approaches were challenged (Thomas, 2002). Other cultural dimensions which might be important to entrepreneurial activities but not mentioned are the culture of consumerism and the culture of thrift. Scholars like (Acs, 1992; Mueller and Thomas, 1997) have concluded from that there is a limited correlation between countries' level of individualism and the strength of entrepreneurial activities which means that the Hofstede's indicators cannot singly give an adequate description of cross-national differences in entrepreneurial activities (Busenitz, Gomez and Spencer, 2000).

3.5 The Global Competitiveness Report

The Global Competitiveness Report (GCR) for 30 years now has compared the competitiveness of nations. Published annually by the World Economic Forum, the main goal has been to provoke discussion among stakeholders that will enhance the formulation of policies which when implemented will help in overcoming the hurdles encountered in improving competition. The report is based on twelve pillars which are derived from the weighted averages of the many components that measure different aspects of competitiveness. These pillars are; Institutions, Infrastructure, Macroeconomic environment, Health and primary education, Higher education and training, Goods market efficiency, Labor market efficiency, Financial market development, Technological readiness, Market size, Business sophistication and Innovation. They are grouped into three main sub-indices; Basic requirement, Efficiency enhancers and Innovation and sophistication (Global Competitiveness Report, 2012).

The data for the compilation of the GCR are obtained from the enrollment rates in educational institutions; the United Nations Organizations, government debt, and budget deficit, the International Monetary Fund, and life expectancy. Data from the annual survey carried out by the World Economic Forum on executive opinion is also used to perform a more qualitative assessment or for cases in which internationally comparable statistical data are not available (Global Competitiveness Report, 2012).

The criticisms of this report stem from the concept of "national competitiveness" with scholars questioning its validity. Companies are known to compete for resources and markets, and the same is assumed for national competitiveness (Lall, 2001) but according to Krugmann (1994), competitiveness is a meaningless word when applied to national economies. Economists are mostly skeptical about the issue of quantifying competitiveness and they are apparently of the opinion that the GCI suffers from serious methodological, analytical and quantitative weakness (Lall, 2001). Other shortcomings of the index are highlighted by The Reut Institute (2006), lamenting that the ordinal ranking of countries fail to express the size or causes of chasms between countries.

3.6 The Legatum Prosperity Index

This index attempts to provide a global assessment of the prosperity on countries based on both income and well being. The first report was published in 2006 by the Legatum Institute. The purpose of the index is to promote an holistic understanding of national prosperity based on the understanding that prosperity is not just about money but also about satisfaction and future prospects because traditional measures are based entirely on a country's income but modern measures have moved beyond the GDP and extend the measure to include aspects of well being, happiness and social mobility. The index is made up of eight sub indices; Economy, Entrepreneurship and opportunities, Governance, Education, Health, Safety and Security, Personal freedom and Social capital. (Legatum Prosperity Index, 2012).

The index uses both quantitative and qualitative variables with a balanced approach of incorporating survey based variables simultaneously with expert assessments and financial and economic indicators. The index employs eighty nine independent variables which are derived from different data sources. The prosperity index applies the same weights to all the sub indices for all countries being surveyed irrespective of the country's level of development to avoid biasness as it is imperative to measure each country by the same yardstick (Legatum Prosperity Index, 2012).

There are few criticisms due to the fact that the index is relatively new and not many studies have dedicated assess its limitations. Nevertheless, there are some criticisms about the index for example, Armstrong (2012) expressed his skepticism of the index's ranking claiming that most data is derived from opinion polls which are subjective and makes comparison across countries difficult. He further emphasized that some of the data have nothing to do with prosperity.

3.7 The Global Entrepreneurship and Development Index

The Global Entrepreneurship and Development Index (GEDI) developed by the Center for entrepreneurship and Public Policy to provide a thorough understanding of economic development by capturing the contextual nature of business formation, development and growth. It is based on comprehensive datasets from countries about entrepreneurial attitudes, aspirations and activity. (GEDI, 2012). The mission of is to furnish a detailed analysis of the entrepreneurial character of nations in order to be able to reveal how much entrepreneurship is in the world. It is a composite index that includes both country level institutional data and organizational building to give policymakers an enabling instrument to understand the strengths and weaknesses of national economies for the development of strategies for implementation of entrepreneurship policies (Acs and Szerb, 2012) and the index may also be considered as an entrepreneurship barometer.

The index is made up of fourteen pillars; opportunity perception, startup skills, non fear of failure, networking, cultural support, opportunity startup, technology sector, quality of human resources, competition, product innovation, process innovation, high growth, internationalization and risk capital. The index relies on the Theory of Constraints (TOC) and the Theory of the Weakest Link (TWL) to view the interaction of the pillars. The penalty for bottlenecks which is used in the index is a practical application of these theories. With regards to entrepreneurship, a bottleneck can be seen as the worst performing link or as a binding constraint in the system (Acs and Szerb 2011).

The general problem with composite indices is the balance between simplification and complication and a serious threat to simplification is the tendency to continue adding variables and components to indices as the scope of the development issues widens. Indices that are concerned with preferences rather than needs are particularly prone to the tendency of continually adding variables. The resulting indices are therefore simple and manageable but may divert attention from critical aspects of development. On the other hand, oversimplification poses the danger of inadvertently omitting crucial components of the development problem (Booysen, 2002).

4.0 Comparison of the reports and indices

In this section, a comparison of the most recent reports and indices is presented. The aim is to illustrate the percentage of the African countries surveyed to the total number of countries considered in each of the reports and indices. The comparison will highlight the current situation with regards to the African context and the purposes and the components of each of the reports/indices, are also shown. The comparison is illustrated in Table 1.0.

From Table 1.0, there is a variance in the years of the surveys considered. The reason for this approach is to use the most recent survey that has included an appreciable number of African countries. For example, the 2012 WBGES, has investigated only the Russian Federation and none

of the African countries. It is also evident that countries in Africa are under-represented in all the indices and reports considered as the countries in Africa are below 35% of the total countries surveyed. Although the intentions of the indices is to provide measurements of the different dimensions of entrepreneurship activities, environments, performance and players at the global level, the surveys are still far from being global as they concentrate more in specific regions.

The components considered in each of the datasets are very general in nature and some may not provide an adequate description of the situation in Africa . For example most of the components emphasis is on the why (focus on the causes) and the when (focus on the emergence) taxonomies of the entrepreneurship lexicon. (Gedeon, 2010). The other taxonomies such as the what (academic entrepreneurship; social entrepreneurship; institutional entrepreneurship; political entrepreneurship) the who (family business entrepreneurship; gender-based entrepreneurship; corporate entrepreneurship) the how (innovative entrepreneurship; imitative entrepreneurship; adaptive entrepreneurship) and the where (local entrepreneurship; returnee entrepreneurship; international entrepreneurship) have not being considered in detailed though these categories are becoming increasingly important in shaping entrepreneurship environments. The culture of consumerism and thrift which also influences entrepreneurship in economies apparently not reported.

5.1 Longitudinal comparison of the databases

This sub-section examines a five year consecutive period of the reports and indices from 2008 to 2012. The aim is to explore which African countries are included in this period. Table 1.1 illustrates the situation and the difficulties encountered in using these reports and indices to conduct longitudinal studies for the purposes of comparing and benchmarking entrepreneurship environments of countries in Africa. The first obstacle is the unavailability of data from all the databases for the period. Another obstacle is the number of countries represented in each of the databases which may affect the comparison within and across regions. This is one of the challenges

faced by researchers examining the entrepreneurship environment in Africa. Another challenge is concerned with the reconciliation of national datasets with international datasets. Some discrepancies exists between these two dataset and reconciling these dataset requires extra efforts and resources. Figures 1 shows a diagram of the number of countries in the different databases for each of the period considered. It can be deduced that though the African countries are few compared to the total number of countries, the situation is gradually changing, which is a good sign for the use of these reports in the future . The inclusion of more countries will enhance the comparison of entrepreneurship environments within and across countries irrespective of the economic development of the country. The year 2009, has the highest number of countries surveyed compared to the other years.

4.2 Names of countries surveyed during the five year period 2008-2012

The names of the countries that were surveyed during the period 2008-2012 for all the databases are illustrated in Table 1.2. The essence is to evaluate the frequency with which certain countries and to know the names of the countries that are included and those that are excluded throughout this period.

5.0 Findings

From Tables 1.1 and 1.2, it is evident that there is a set of countries that appear in almost all the indices and reports and these countries appear to be in the best performing group of countries in Africa. These countries are; Algeria, Angola, Botswana, Egypt, Ghana, Morocco, Namibia, Nigeria, South Africa, Tunisia, Uganda and Zambia. But taking into consideration that North Africa is usually grouped together with the Middle-East, the following countries represents sub-Saharan Africa; Botswana, Ghana, Namibia, Nigeria, South Africa, Uganda, and Zambia.

With such a small number of countries representing sub-Saharan Africa, researchers trying to compare the entrepreneurship environments in this region using international databases face a difficult task due to the under-representation of countries. A second challenge is that even the countries that are represented in almost all databases do not appear in all the years considered which may affect attempts on the longitudinal comparison. Another challenge, is that most national statistic offices do not produce data with regards to the national entrepreneurship environments as these economies are still at the early stage of understanding the differences between entrepreneurship and Small and Medium scale Enterprises (Stevenson and Lundstrom, 2001). All of these challenges may contribute to the dearth of conducting research in this geography.

Clustering the countries into the categories such as; countries that appear in all databases for the entire period considered in this study in category 1 (C1), countries that never appear in category 2 (C2), countries that appear in all databases but not all the time in category 3 (C3), and countries that appear for the entire period but not in all the databases in category 4 (C4), Figure 2 is constructed and it illustrates, none of the countries appear in all databases for the period under consideration which indicates that conducting cross country comparison is almost impossible. The other categories contain one or more countries which also renders comparison difficult.

One important observation is that most of the countries are present in databases such as the Economic Freedom, Global competitiveness and the Legatum prosperity indices. But in the two main databases that are concerned with entrepreneurship GEM and GEDI, the countries considered are still few though the number is growing at a slow pace.

One of the impacts of these challenges is shown in the lack of interest in conducting research with regards to entrepreneurship environments in the continent when compared to research that carried out in other continents. Another impact is that the actual entrepreneurial base of countries is not well known as findings and results are normally based on assumptions due to paucity of data or on

extrapolations from data obtained elsewhere. Anecdotal evidence show that using such methods may adversely affect the outcome of studies conducted.

The relationship between entrepreneurship and economic development can be better understood with country specific data as factors that have been taken for granted to be responsible for the shaping of entrepreneurship environments may be vary from one country to another. If these factors which may be idiosyncratic are not properly understood due to lack of data, then conclusions drawn from research can be vague and might create a quandary for researchers and practitioners.

To ameliorate the situation, the following steps might be taking into consideration;

- International databases should endeavour to broaden the spectrum to include as many countries as is possible when conducting their surveys.
- Researchers should conduct their field surveys though it is not an easy task in terms of the resources needed and the risks involved.
- International agencies operating in Africa could develop a database about the entrepreneurship environments in Africa which will be accessible to the public, researchers and practitioners.
- Each of the sub-region within the continent (for example; The Economic Commission of the West African States ECOWAS) to create an entrepreneurship barometer for measuring entrepreneurship in countries in Western Africa.
- The African Union (AU) might copy from their counterpart in the European Union (EU) to create a similar body like the Euro-Stat Entrepreneurship Indicator Program. (An Afro-Stat Entrepreneurship Indicator Program).

Applying the above suggestions, could mitigate the impact of the challenges faced by researchers and simultaneously show munificence in enhancing the understanding of entrepreneurship

environments in Africa. Such an action will provide a profound depth of the comprehension of the entrepreneurship environments in the diverse countries of Africa and it will extend the existing literature.

6.0 Conclusions

The challenges researchers face when studying entrepreneurship environments in Africa have been highlighted. The impact of these hurdles on researchers and their findings have also been shown. A few suggestions that could help to mitigate the impact of these challenges have been presented. The table and figures have assisted in illustrating the situation at present when using international databases for studying entrepreneurship environments in Africa.

Though researchers might play a vital role in improving the situation, to overcome these hurdles, one solution is that international organizations, regional organizations and the African Union should be interested in collecting and analyzing entrepreneurship data with regards to Africa. These institutions should endeavor to include more countries at any time data is being collected since entrepreneurship is very dynamic and complex. Such data if valid and reliable can assist individuals in understanding and interpreting the entrepreneurial base of countries. This will then permit cross country comparisons, benchmarking and simultaneously pave a way for policymakers at the national and international level to formulate policies that are country specific for the improvement of such environments.

6.1 Recommendations

Variances within and across countries in terms of entrepreneurial activities are wide. These differences are important to be understood and may become a fertile ground for further research (Troilo, 2011).

The entrepreneurship context, is a topic which scholars like Wright and Zahra (2011) have studied to explain the benefits of engaging the context in future entrepreneurship research and this may be useful for both scholars and practitioners as such studies involve the engagement and participation of individuals interested in entrepreneurship and institutions that contribute in the promotion of entrepreneurship.

Universities in Africa should be involved in studies that will help to evaluate national entrepreneurship environments as a first step towards the creation of national entrepreneurship systems. The reason been that these institutions though at times lack the finance, they possess other resources such as human capital which is capable of conducting this kind of research. A positive relationship between universities, governments, practitioners, the general public and the international organizations is necessary for the outcome of such an exercise to have a positive impact in society.

6.2 Limitations

Not all indices and reports have been considered as some of these reports are design for specific regions for example the OCED-Euro Stat Entrepreneurship Indicator Program, the European Commission Survey on Entrepreneurship/ Eurobarometer and the Gallup survey to name a few. The African Economic Outlook is also not included as its focuses more on general economic policies.

Some of the datasets analyzed contain data for period of the five years considered for example, the 2012 Economic Freedom report, contains data from 2008-2010. The Hofstede's indicators are provided by the Hofsted's center for the comparison of two countries obtained from the center's website and most of the countries are not included. National and regional databases within Africa have not been considered during this study.

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Table 1.0 Summary of Reports considered

Report/ Index	First survey	Purpose	Main components	Most recent survey considered	Total no. of countries	No. of African countries	Percent of African countries
GEM	1999	To advance understanding about entrepreneurship and facilitates decisions and initiatives that promote entrepreneurial activities	Perceived opportunities; Perceived capabilities; Fear of Failure; Entrepreneurial intentions; Entrepreneurship as a good career choice; High status to successful entrepreneurs; Media attention for entrepreneurship; Nascent entrepreneurship rate; New Business ownership rate; Early-stage entrepreneurship activity; Established business ownership rate; Discontinuation of business; Necessity driven; Improvement driven opportunity.	2012	69	13	19%
WBGES	2002	To provide comprehensive company–level data in emerging markets and developing economies	Corruption; Crime; Finance; Gender; Informality; Infrastructure; Innovation and Technology; Performance; Regulation and Taxes; Trade; Workforce	2009	51	17	33%
EFR	1996	To measure the degree to which policies and institutions of countries are supportive of economic freedom	Size of government; expenditure, taxes and enterprises; Legal structure and the security of property rights; Access to sound money; Freedom to trade internationally; Regulation of credit, labor and business	2009	141	39	28%
HI	1967	To compare the different national cultures.	Power distance; Individualism versus Collectivism; Masculinity versus Femininity; Uncertainty Avoidance; Long Term Orientation; Indulgence versus Restraint	2005	93	8	9%
GCR	1979	To study and benchmark the competitiveness of nations.	Institutions; Infrastructures; Macroeconomic environment; Health and Primary Education; Higher Education and Training; Goods Market Efficiency, Labor Market Efficiency; Financial Market Development; Technological Readiness; Market Size; Business Sophistication,	2012	144	38	26%

			Innovation				
LPI	2006	Global assessment of prosperity based on both income and well being.	Economy; Entrepreneurship and Opportunity; Governance; Education; Health; Safety and Security; Personal Freedom; Social Capital	2011	110	22	20%
GEDI	2008	Detailed looked into the entrepreneurial character of nations to determine how much entrepreneurship the world has.	Entrepreneurial attitudes; Entrepreneurial activity; Entrepreneurial aspirations	2013	118	28	24%

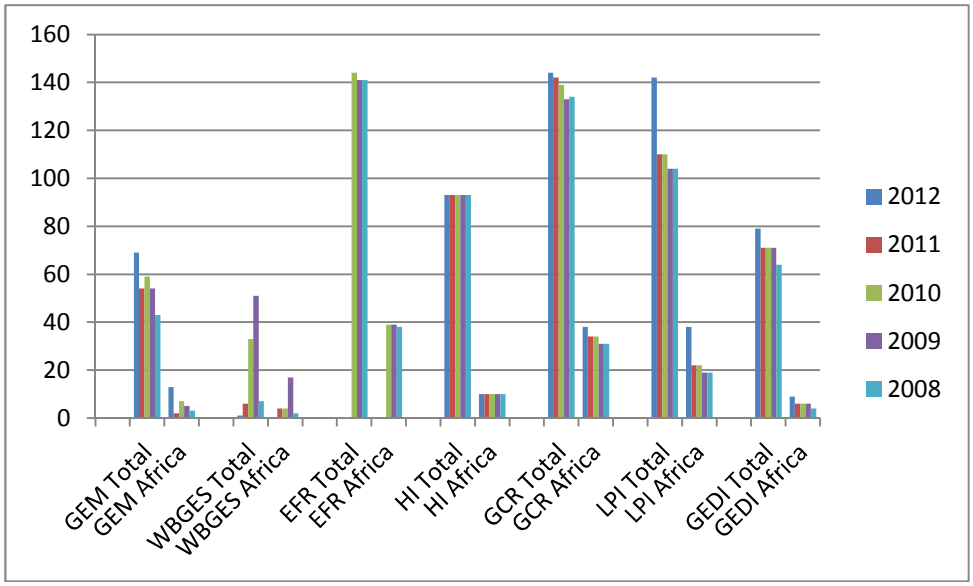
Source: Adapted from: GEM Report, 2012; World Bank Enterprise Survey website, 2013; Economic Freedom Report 2011; Hofstede Center website, 2013; GCR, 2012; LPI, 2011; GEDI, 2012.

Table 1.1 Longitudinal comparison of countries

Report/Index	**Description**	**Years**				
		2012	**2011**	**2010**	**2009**	**2008**
GEM	Total countries African Countries Percentage of African Countries	69 13 19%	54 2 4%	59 7 12%	54 5 9%	43 3 7%
WBGES	Total countries African Countries Percentage of African Countries	1 0 0%	6 4 67%	33 4 12%	51 17 33%	7 2 29%
EFR	Total countries African Countries Percentage of African Countries	- - -	- - -	144 39 27%	141 39 28%	141 38 27%
HI	Total countries African Countries Percentage of African Countries	93 10 11%	93 10 11%	93 10 11%	93 10 11%	93 10 11%
GCR	Total countries African Countries Percentage of African Countries	144 38 27%	142 34 24%	139 34 24%	133 31 23%	134 31 23%
LPI	Total countries African Countries Percentage of African Countries	142 38 27%	110 22 20%	110 22 20%	104 19 18%	104 19 18%
GEDI	Total countries African Countries Percentage of African Countries	79 9 11%	71 6 8%	71 6 8%	71 6 8%	64 4 6%

Source: Adapted from: GEM Report, 2012; World Bank Enterprise Survey website, 2013; Economic Freedom Report 2011; Hofstede Center website, 2013; GCR, 2012; LPI, 2011; GEDI, 2012.

Figure 1: Longitudinal comparison of databases



Source: Constructed from Table 1.1

Table 1.2: Names of countries included for the period 2008-2012.

Index/Report	**2012**	**2011**	**2010**	**2009**	**2008**
GEM	Angola Botswana Ethiopia Ghana Malawi Namibia Nigeria South Africa Uganda Zambia	Algeria South Africa	Angola Egypt Ghana South Africa Tunisia Uganda Zambia	Algeria Morocco Uganda South Africa Tunisia	Angola Egypt South Africa
WBGES	No African country listed.	Ethiopia Rwanda Zimbabwe	Angola Congo (DR) Mali	Benin Burkina Faso Cameroon Cape Verde Chad Congo (Rep) Cote d' Ivoire Eriteria Gabon Lesotho Liberia Madagascar Malawi Mauritius Niger	Egypt

				Sierra Leone Togo	
EFR	Data not available	Data not available	Algeria Benin Botswana Burundi Cameroon Central African Republic Chad Congo (DR) Congo (Rep) Cote d' Ivoire Egypt Gabon Ghana Guinea-Bissau Kenya Madagascar Malawi Mali Mauritius Morocco Namibia Niger Nigeria Rwanda Senegal Sierra Leone South Africa Tanzania Togo Tunisia Uganda Zambia Zimbabwe	Algeria Benin Botswana Burundi Cameroon Central African Republic Chad Congo (DR) Congo (Rep) Cote d' Ivoire Egypt Gabon Ghana Guinea-Bissau Kenya Madagascar Malawi Mali Mauritius Morocco Namibia Niger Nigeria Rwanda Senegal Sierra Leone South Africa Tanzania Togo Tunisia Uganda Zambia Zimbabwe	Algeria Benin Botswana Burundi Cameroon Central African Republic Chad Congo (DR) Congo (Rep) Cote d' Ivoire Egypt Gabon Ghana Guinea-Bissau Kenya Madagascar Malawi Mali Mauritius Morocco Namibia Niger Nigeria Rwanda Senegal Sierra Leone South Africa Tanzania Togo Tunisia Uganda Zambia Zimbabwe
HI	Egypt Ethiopia Ghana Kenya Morocco Nigeria Sierra Leone South Africa Tanzania Zambia	Egypt Ethiopia Ghana Kenya Morocco Nigeria Sierra Leone South Africa Tanzania Zambia	Egypt Ethiopia Ghana Kenya Morocco Nigeria Sierra Leone South Africa Tanzania Zambia	Egypt Ethiopia Ghana Kenya Morocco Nigeria Sierra Leone South Africa Tanzania Zambia	Egypt Ethiopia Ghana Kenya Morocco Nigeria Sierra Leone South Africa Tanzania Zambia
GCR	Algeria Benin Botswana Burkina Faso Burundi Cameroon Cape Verde Chad Coted'Ivoire Egypt Ethiopia Gabon Ghana Guinea Kenya Lesotho Liberia Libya Madagascar Malawi Mali Mauritania Mauritius Morocco	Algeria Angola Benin Botswana Burkina Faso Burundi Cameroon Cape Verde Chad Cote d'Ivoire Egypt Ethiopia Gambia, The Ghana Kenya Lesotho Madagascar Malawi Mali Mauritania Mauritius Morocco Mozambique Namibia	Algeria Angola Benin Botswana Burkina Faso Burundi Cameroon Cape Verde Cote d'Iviore Egypt Ethiopia Gambia, The Ghana Kenya Lesotho Libya Madagascar Malawi Mali Mauritania Mauritius Morocco Mozambique Namibia	Algeria Benin Botswana Burkina Faso Burundi Cameroon Chad Cote d'Ivoire Egypt Ethiopia Gambia, The Ghana Kenya Lesotho Libya Madagascar Malawi Mali Mauritania Mauritius Morocco Mozambique Namibia Nigeria	Algeria Benin Botswana Burkina Faso Burundi Cameroon Chad Cote d'Ivoire Egypt Ethiopia Gambia, The Ghana Kenya Lesotho Libya Madagascar Malawi Mali Mauritania Mauritius Morocco Mozambique Namibia Nigeria

	Mozambique Namibia Nigeria Rwanda Senegal Seychelles Sierra Leone South Africa Swaziland Tanzania The Gambia Uganda Zambia Zimbabwe	Nigeria Rwanda Senegal South Africa Swaziland Tanzania Tunisia Uganda Zambia Zimbabwe	Nigeria Rwanda Senegal South Africa Swaziland Tanzania Tunisia Uganda Zambia Zimbabwe	Senegal South Africa Tanzania Tunisia Uganda Zambia Zimbabwe	Senegal South Africa Tanzania Tunisia Uganda Zambia Zimbabwe
LPI	Algeria Angola Benin Botswana Burkina Faso Burundi Cameroon Central African Republic Chad Congo (DR) Congo (Rep. of) Cote d' Ivoire Djibouti Egypt Ethiopia Ghana Guinea Kenya Liberia Malawi Mali Mauritania Nigeria Morocco Mozambique Namibia Niger Rwanda Senegal Sierra Leone South Africa Sudan Tanzania Togo Tunisia Uganda Zambia Zimbabwe	Algeria Botswana Cameroon Central African Republic Egypt Ethiopia Ghana Kenya Mali Morocco Mozambique Namibia Nigeria Rwanda Senegal South Africa Sudan Tanzania Tunisia Uganda Zambia Zimbabwe	Algeria Botswana Cameroon Mozambique Central African Republic Egypt Ethiopia Ghana Kenya Mali Morocco Namibia Nigeria Rwanda Senegal South Africa Sudan Tanzania Tunisia Uganda Zambia Zimbabwe	Algeria Botswana Cameroon Central African Republic Egypt Ghana Kenya Mali Morocco Mozambique Namibia Nigeria Senegal South Africa Sudan Tanzania Tunisia Zambia Zimbabwe	Algeria Botswana Cameroon Central African Republic Egypt Ghana Kenya Mali Morocco Mozambique Namibia Nigeria Senegal South Africa Sudan Tanzania Tunisia Zambia Zimbabwe
GEDI	Algeria Angola Egypt Ghana Morocco South Africa Tunisia Uganda Zambia	Algeria Egypt Morocco South Africa Tunisia Uganda	Algeria Egypt Morocco South Africa Tunisia Uganda	Algeria Egypt Morocco South Africa Tunisia Uganda	Egypt Morocco South Africa Uganda

Source: Adapted from: GEM Report, 2012; World Bank Enterprise Survey website, 2013; Economic Freedom Report 2011; Hofstede Center website, 2013; GCR, 2012; LPI, 2011; GEDI, 2012.

C1: countries that appear in all databases for the entire period considered **None of the countries**	**C2:** countries that never appear **Equatorial Guinea** **Sao Tome & Principe** **Somalia** **South Sudan**
C3: countries that appear in all databases but not all the time **Egypt**	**C4:** countries that appear for the entire period but not in all the databases **South Africa** **Algeria** **Morocco** **Tunisia** **Uganda**

Figure 2 Categories of countries